

November 18, 2016

Ms. Chancellor:

By the authority of the Senate of McMaster University, I have the honour to present

SOW-HSIN CHEN

Dr. Sow-Hsin Chen is an Emeritus Professor of Applied Radiation Physics in the Department of Nuclear Science and Engineering at the Massachusetts Institute of Technology, where he has been a member of the faculty since 1968. He is also a McMaster alumnus who earned his PhD in 1964 working under the supervision of Nobel Laureate, Bertram Brockhouse, after earning graduate degrees from the University of Michigan and the National Tsing Hua University.

Dr. Chen's groundbreaking work has included investigations into the properties of disordered materials and supercooled and interfacial water, using neutron scattering and other related scattering techniques. The co-author of more than 415 research publications, he has successfully designed and implemented novel experimental techniques and extended the frontiers of neutron, x-ray and laser spectroscopy. His research includes photon correlation spectroscopy studies of critical dynamics of a binary liquid mixture, and neutron scattering studies of the thermodynamics and dynamics of confined water in supercooled states near hydrophilic and hydrophobic surfaces. He has also made significant contributions to the study of hydrogen storage by exploring the uses of activated carbon to allow the element to be stored at room temperature. He contributed significantly to the development of photon correlation spectroscopy (PCS) and, in 1970, constructed the first 128-channel digital photon correlator in the United States.

Dr. Chen has held an impressive series of international appointments over the last five decades. He spent time in the Neutron Physics Division of the legendary Chalk River Laboratories, then was an Assistant Professor at the University of Waterloo. He held visiting positions with the Atomic Energy Research Establishment at Harwell in England and with the Division of Applied Science at Harvard University. He joined MIT as an Assistant Professor in 1968, becoming a Professor in 1974. He served in that capacity until 2008 when he became Professor Emeritus.

Dr. Chen has been a Visiting Professor or Fellow at more than a dozen institutions around the world including the Academia Sinica in Beijing, Ecole Superieure de Physique et Chimie de Paris, the University of Konstanz in Germany, the University of Bordeaux, the Argonne National Lab in Illinois, Kyoto University in Japan, and the National Tsing Hua University of Taiwan. He received the 2008 Clifford G. Shull Prize for Excellence in Neutron Science, the 2015 Guinier Prize for Excellence in Small Angle Neutron Scattering, and the Alexander von Humbolt US Senior Scientist Award. He is a fellow of the American Physical Society, the American Association for the Advancement of Science, the Neutron Scattering Society of America, and the Japan Society for the Promotion of Science. The University of Messina, Italy, awarded Dr. Chen an Honorary Degree in 2014 and he has also been named an academician of the Academia Sinica, and received the Career Achievement Award from MIT.

Today, Ms. Chancellor, I present Dr. Sow-Hsin Chen to you so that McMaster University may pay tribute to his considerable contributions to science and his profession by conferring upon him his second McMaster degree, on this occasion, the degree Doctor of Science, *honoris causa*.

Patrick Deane
President and Vice-Chancellor